STRUCTURE IDENTIFICATION CRITERIA OF NONLINEAR-SYSTEMS VIA BISPECTRUM

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Summary

Models, which are composed of cascades of linear dynamic and static nonlinear blocks, are considered. These models, known in the literature as generalized Wiener-Hammerstein models, are extensively used to represent nonlinear dynamic systems, The bispectrum characteristics of the output sequence are investigated, and useful results are obtained which facilitate the structure identification of the underlying nonlinear system. Numerical examples are simulated by using noisy output measurements to illustrate the results.